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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/500,274	06/28/2004	Masataka Ozeki	MTS-3506US	9342
23122	7590	11/29/2007	EXAMINER	
RATNERPRESTIA			WANG, EUGENIA	
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			11/29/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/500,274	<b>Applicant(s)</b> OZEKI ET AL.	
	<b>Examiner</b> Eugenia Wang	<b>Art Unit</b> 1795	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 01 October 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) 10 and 11 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 and 12 is/are rejected.
- 7) ☒ Claim(s) 1-9 and 12 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 June 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>6/28/04, 11/16/07</u> . | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***Election/Restrictions***

1. Applicant's election without traverse of Group 1 (claims 1-9 and 12) in the reply filed on October 1, 2007 is acknowledged.

***Preliminary Amendment***

2. The Preliminary Amendment submitted on June 28, 2007 has been acknowledged.

***Priority***

3. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

***Information Disclosure Statement***

4. The information disclosure statements filed June 28, 2007 and November 16, 2007 have been placed in the application file and the information referred to therein has been considered as to the merits. (Note: Only the provided English abstracts (and partial English translation of JP 2001-176528) of the Japanese documents have been considered. For consideration of the full disclosure, a translation in full is required.)

***Drawings***

5. Figure 9 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct

any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Objections***

6. Claims 1-9 and 12 are objected to because of the following informalities: claim 3 uses a “;” in between “temperature” and “and.” The use of the semicolon is not a grammatically correct way to denote a short series and thus should be removed. Appropriate correction is required. Since claims 1, 2, 4-9, and 12 are dependent on claim 3, they are objected to for the same reason.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-9 and 12 rejected under 35 U.S.C. 102(b) as being anticipated by WO 01/92050 (Yamanashi).

As to claim 3, Yamanashi teaches a fuel cell system that generates electricity via hydrogen gas (generated from methanol) (fuel) and oxygen gas (oxidizer) (p8, lines 9-15). There is a fuel reform reactor [120] (fuel processor) that produces the fuel to be supplied to the fuel cell from the fuel (via fuel injector [145]) (fig. 1). Combustor [140] (combustion device) combusts residual fuel gas that was unconsumed in the fuel cell (seen in fig. 1). This action raises the temperature of the reactor (reform reactor [120]),

since the exhaust gas (heated from the combustor) is ultimately delivered to the reform reactor [120] (fuel processor). Furthermore, the power manager [210] takes the electricity generated from the fuel cell stack [200] and delivers it to a motor (p 8, lines 24-28). The power manager [210] acts as an electric power generation instructing means, as it delivers the needed power via the fuel cell and a secondary battery to the motor, and thus inherently determines how much electric power is generated by the fuel cell in order to determine how much electricity is needed from the secondary battery to deliver to the motor (load). Yamanashi's fuel cell system has power manager [210] (electric power generation instructing means), temperature sensor [122] of the reform reactor [120] (fuel processor), as well several of injectors [145, 151, 152] and flow rate valves [121, 141, 131] connected a control unit [300], as indicated by the dashed lines. The control of the fuel, water, and air flow rates would controls how much reactant is delivered to the fuel cell, and thus the rate at which power is generated and supplied. Therefore, the system of Yamanashi is capable of operating in such a manner that said electric power generation instructing means decreases the electric power generated by said fuel cell depending on the decrease of load power to be supplied, the rate at which the generated electric power is decreased depending on one of a) the change of the temperature and b) the temperature of the fuel processor.

It has been held that the recitation of an element is "capable" of performing a function is not a positive limitation but only requires the ability to so perform. It does not constitute a limitation in any patentable sense. *In re Hutchinson*, 69 USPQ 138.

While intended use recitations and other types of functional language cannot be entirely disregarded. However, in apparatus, article, and composition claims, intended use must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. In re Casey, 370 F.2d 576, 152 USPQ 235 (CCPA 1967); In re Otto, 312 F.2d 937, 938, 136 USPQ 458, 459 (CCPA 1963).

Claims directed to apparatus must be distinguished from the prior art in terms of structure rather than function. In re Danly, 263 F.2d 844, 847, 120 USPQ 528, 531 (CCPA 1959). See also MPEP § 2114.

The manner of operating the device does not differentiate an apparatus claim from the prior art. A claim containing a "recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus" if the prior art apparatus teaches all the structural limitations of the claim. Ex parte Masham, 2 USPQ2d 1647 (Bd. Pat. App. & Inter. 1987).

As to claim 1, Yamanashi's fuel cell system with power manager [210] (electric power generation instructing means), temperature sensor [122] of the reform reactor [120] (fuel processor), as well several of injectors [145, 151, 152] and flow rate valves [121, 141, 131] connected a control unit [300], as indicated by the dashed lines is capable operating such that the rate at which the generated electric power is decreased

is made different depending on the change of the temperature of the fuel processor. For the Office's position on "capable of" for apparatus claims, please refer to the rejection of claim 3.

As to claim 2, Yamanashi's fuel cell system with power manager [210] (electric power generation instructing means), temperature sensor [122] of the reform reactor [120] (fuel processor), as well several of injectors [145, 151, 152] and flow rate valves [121, 141, 131] connected a control unit [300], as indicated by the dashed lines is capable operating wherein the generated electric power is decreased at a rate with a predetermined upper-limit while the temperature of said fuel processor is rising but at unlimited rate while the temperature of said fuel processor is not rising. For the Office's position on "capable of" for apparatus claims, please refer to the rejection of claim 3.

As to claim 4, Yamanashi's fuel cell system with power manager [210] (electric power generation instructing means), temperature sensor [122] of the reform reactor [120] (fuel processor), as well several of injectors [145, 151, 152] and flow rate valves [121, 141, 131] connected a control unit [300], as indicated by the dashed lines is capable operating such that a first power limitation mode preventing the decrease of generated electric power is executed when the temperature of said fuel processor is not lower than a first threshold value and the rate at which the generated electric power is decreased is not limited when the temperature of said fuel processor is not higher than a second threshold value which is lower than the first threshold value. For the Office's position on "capable of" for apparatus claims, please refer to the rejection of claim 3.

As to claim 5, Yamanashi's fuel cell system with power manager [210] (electric power generation instructing means), temperature sensor [122] of the reform reactor [120] (fuel processor), as well several of injectors [145, 151, 152] and flow rate valves [121, 141, 131] connected a control unit [300], as indicated by the dashed lines is capable operating in a manner wherein said first power limitation mode is released when said electric power generation instructing means maintains or beings to raise ht electric power generated by said fuel cell. For the Office's position on "capable of" for apparatus claims, please refer to the rejection of claim 3.

As to claim 6, Yamanashi's fuel cell system with power manager [210] (electric power generation instructing means), temperature sensor [122] of the reform reactor [120] (fuel processor), as well several of injectors [145, 151, 152] and flow rate valves [121, 141, 131] connected a control unit [300], as indicated by the dashed lines is capable operating such that a second power limitation mode of decreasing the generated electric power at a rate with a predetermined upper limit is executed when the temperature of said fuel processor is not lower than a third threshold value, and the rate at which the generated electric power is decreased is not limited when the temperature of said fuel processor is not higher then a fourth threshold value which is lower than the third threshold value. For the Office's position on "capable of" for apparatus claims, please refer to the rejection of claim 3.

As to claim 7, Yamanashi's fuel cell system with power manager [210] (electric power generation instructing means), temperature sensor [122] of the reform reactor [120] (fuel processor), as well several of injectors [145, 151, 152] and flow rate valves



[121, 141, 131] connected a control unit [300], as indicated by the dashed lines is capable operating in a manner wherein said second power limitation mode is released when said electric power generation instructing means maintains or begins to raise the electric power generated by said fuel cell. For the Office's position on "capable of" for apparatus claims, please refer to the rejection of claim 3.

As to claim 8, Yamanashi's fuel cell system with power manager [210] (electric power generation instructing means), temperature sensor [122] of the reform reactor [120] (fuel processor), as well several of injectors [145, 151, 152] and flow rate valves [121, 141, 131] connected a control unit [300], as indicated by the dashed lines is capable operating such that a first power limitation mode of preventing the decrease of generated electric power is executed when the temperature of said fuel processor is not lower than the first threshold value, a second power limitation mode of decreasing the generated electric power at a rate with a predetermined upper limit is executed when the temperature of said fuel processor is not higher than the second threshold value, which is lower than said first threshold value and the rate at which the generated electric power is decreased is not limited when the temperature of said fuel processor is not higher than the fourth threshold value which is lower than the second threshold value. For the Office's position on "capable of" for apparatus claims, please refer to the rejection of claim 3.

As to claim 9, Yamanashi's fuel cell system with power manager [210] (electric power generation instructing means), temperature sensor [122] of the reform reactor [120] (fuel processor), as well several of injectors [145, 151, 152] and flow rate valves

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[121, 141, 131] connected a control unit [300], as indicated by the dashed lines is capable operating such that both of said first and second power limitation modes are released when said electric power generation instructing means maintains or begins to raise the electric power generated by said fuel cell. For the Office's position on "capable of" for apparatus claims, please refer to the rejection of claim 3.

As to claim 12, Yamanashi's fuel cell system with power manager [210] (electric power generation instructing means), temperature sensor [122] of the reform reactor [120] (fuel processor), as well several of injectors [145, 151, 152] and flow rate valves [121, 141, 131] connected a control unit [300], as indicated by the dashed lines is capable operating such that the rate at which the generated electric power is decreased is made different depending on the temperature of the fuel processor. For the Office's position on "capable of" for apparatus claims, please refer to the rejection of claim 3.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eugenia Wang whose telephone number is 571-272-4942. The examiner can normally be reached on 7 - 4:30 Mon. - Thurs., EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on 571-272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

EW



GREGG CANELMO  
PRIMARY EXAMINER

11/1/07